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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,199	06/29/2001	Eric Cohen-solal	US010324	7568

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER
CHANG, KENT WU

ART UNIT	PAPER NUMBER
2629	

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 June 2006*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-18 and 20-24* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18 and 20-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-18 and 20-21 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Inagaki (US Patent No. 5,999,214) in view of Pavlovic et al

("Integration of audio/visual information for use in human-computer intelligent

interaction", Image processing, 1997 Proceedings IEEE, pages 121-124) and Cox et al

(US Patent No. 6,154,723).

        With regard to claim 1. Inagaki teaches a video display device comprising: a

display configured to display a primary image and a picture-in-picture image

(PIP) overlaying the primary image (Figure 11, items 13 and 17); and a processor

operatively coupled to the display and configured to receive a first video data

stream for the primary image, to receive a second video data stream for the PIP

(Figure 11, items 22 and 16). Inagaki does not teach, "to recognize an audio

command related to a PIP display characteristic, the processor, upon recognizing

the audio command, activates an image acquisition component that is configured

to recognize a user hand gesture related to manipulating the PIP display

characteristic, the processor manipulates the PIP display characteristic according

to the audio command and the hand gesture". Inagaki apparatus instead detects

and responds to any of the many sounds or "audio indications" in the form of a

unique voices of a specific speaking attendees with the same command which is

move the camera and highlight the PIP of the speaking attendee and does not

depend on "related gesture from a user" (figure 11 "VOICE DIRECTION

DETECTION UNIT", column 3, lines 31-33, column 10, lines 16-25).

 However, Pavlovic demonstrates the concept of a system utilizing a combination

of "audio commands" and a "related gesture" from a user as a means of

controlling a graphical object on display, which is analysis to where Inagaki

controlled a specific graphical object such as a PIP on a display (see Pavlovic

page 123 3. Experimental Results section).

Therefore, it would have been obvious for one ordinary skill in the art at the time

of the invention to use a "received audio command and related gesture from a

user", as taught by Pavlovic in the apparatus of Inagaki, because of the

motivation directly provided by Pavlovic: "Psychological studies, for example,

show that people prefer to use hand gestures in combination with speech in a

virtual environment, since they allow the user to interact without special training

or special apparatus". Pavlovic further teaches that "words or gestures alone can

be used", therefore, it would have been obvious for one ordinary skill in the art at

the time of the invention to use words and gestures alternatively, or

simultaneously, to control the data inputting since it merely depends on the

user's preference and the type of the application being used. Any levels of

integration of the voice commands and gesture commands would perform equally well in providing input to the computer. Furthermore, it would have been obvious matter of design choice to choose whether to enter a voice command first, then a gesture command, or in opposite order, since it merely depends on the function being performed and the assignments of the commands. For example, if movement of the cursor is controlled by gesture commands and selection of a menu item is input by voice commands, then whether a voice command or a gesture command is needed first would depend on the current position of the cursor: gesture commands first if the user needs to move the cursor, but voice commands first if the user wants to select the current highlighted menu item (this reads on the limitation of "the processor is configured to receive the related gesture from the user in response to the receive audio command"). As evidence, Cox teaches a data inputting system for a computer using voice commands and gesture commands, wherein some voice commands trigger input from gesture commands (column 5 lines 10-19).

Consider claim 2. Inagaki as modified teaches the method for inputting data to a video display device having PIP windows. Therefore, it would have been obvious for one ordinary skill in the art at the time of the invention to use the data for controlling any parameter changes including size adjustment of the PIP window so as to enable simple and precise data inputting for controlling the size adjustment of the PIP window.

With regard to claim 3, Inagaki as modified teaches the video display device of claim 1, comprising a microphone for receiving the audio command from the user (See Inagaki figure 11).

With regard to claim 4, Inagaki as modified teaches the video display device of claim 1 wherein the processor is configured to analyze audio information received from the user to identify when a PIP related audio indication is intended by the user (See Inagaki figure 8a and 8b).

With regard to claim 5, Inagaki as modified teaches the video display device of claim 1, wherein the processor is configured to analyze image information received from the user after the audio command is received to identify the change in the PIP display characteristic that is expressed by the received gesture (See Inagaki figure 8a and 8b and Pavlovic et al figures 6-8 and especially the Pavlovic figure 5 "HIGH LEVEL FEATURE INTEGRATION" where it was obvious the pre analyze step is to simultaneously receive the video and audio data using the camera and the microphone, where it is then split into a parallel visual and audio estimator/classifier module which is followed by a second stage which contains a feature integration/combination module where the combination module computes the likelihood of the pairs of gesture and verbal words. This claim language is very broad here because Pavlovic clearly receives both the audio and video before he analyzes the video or audio data, this is just the logical progression claimed).

With regard to claim 6, Inagaki as modified teaches the video display device of claim 5, wherein the image information is contained in a sequence of images and wherein the processor is configured to analyze the sequence of images to determine the received gesture (since a gesture can be a motion which would require a sequence of images to detect this feature is obvious to the system of Inagaki and Pavlovic also see Pavlovic section 21). With regard to claim 7, the combination of Inagaki and Pavlovic teaches the video display device of claim 1, wherein the image information is contained in a sequence of images and wherein the processor is configured to determine the received gesture by analyzing the sequence of images and determining a trajectory of a hand of the user (since a gesture can be a motion which would require a sequence of images to detect this feature is obvious to the system of Inagaki and Pavlovic and is merely viewed as directed towards an obvious intended use of which the combination of which it is capable also see Pavlovic section 2.1).

With regard to claim 8, Inagaki as modified teaches the video display device of claim 1, wherein the processor is configured to determine the received gesture by analyzing an image of the user and determining a posture of a hand of the user (since a gesture can be a posture of a hand this feature is obvious to the system of Inagaki and Pavlovic and is merely viewed as directed towards an obvious intended use of which the combination of which it is capable also see Pavlovic section 2.1).

With regard to claim 9, Inagaki as modified suggest the video display device of claim 1, wherein the video display device is a television (since Pavlovic shows a projection screen in figure 6 and since it is also well-known in the prior ad that televisions use projection screens one would be motivated to have a projection screen with a dual use such as conference and watching the game and is merely viewed as directed towards an obvious intended use of which the combination of which it is capable) .

With regard to claim 10, Inagaki as modified teaches the video display device of claim 1, wherein the image is a sequence of images of the user containing the user gesture, the video display device comprising a camera for acquiring the sequence of images of the user (see Inagaki figure 11, item 2).

With regard to claims 11-14, most of the limitations was already shown above with regards to apparatus claims 1-10 to be obvious and therefore the method claims 11-14 which corresponds to the apparatus were also obvious and in addition the applicant is now specifically claiming', "determining whether the received audio command is one of a plurality of expected audio command; analyzing a gesture of the user if the received audio command is one of the plurality of expected audio indications" (SEE Pavlovic figure 7 where he illustrates a plurality of "expected audio indications" SPEECH , and a plurality of "expected gestures" GESTURE. Now look at Pavlovic figure 5 where he illustrates in the audio estimator/ classifier module receiving and "determining whether the received audio command is one of a plurality of expected audio

commands" and where also he illustrates in the video estimator/classifier module receiving and "determining whether the received gesture is one of a plurality of expected gestures". It is an obvious practice that if either data collection process produces an error because the audio command or gesture used is not from the expected sets illustrated in figure 7 that the next step of "analyzing a gesture of the user if the received audio indication is one of the plurality of expected audio" in the Feature Integrator will not happen. This is because it is an obvious practice when an artificial intelligent or smart device as illustrated by the combination of Inagaki/Pavlovic can not comprehend the data within a reasonable range of certainly or as stated by Pavlovic "computes the likelihood" that it simply errors out in the flow chart and does nothing but waits for further inputs.).

With regard to claims 15-18 the combination of Inagaki and Pavlovic was shown above to read on most of these limitation in claims 1-14 in addition to summarize a feature directed towards a program stored implementing this process is inherent to the automatic computer system taught by the combination of Inagaki and Pavlovic.

With regard to claim 20, Inagaki as modified was shown above to read on these limitation in claims 1-18 (See Pavlovic figure 5 and specifically the rejection of 11 above).

With regard to claim 21, see the rejection above, note that the device of Inagaki as modified is a computer performing data inputting functions, and therefore includes the program segments for performing each of the functions.

With regard to claims 22-24, Inagaki uses a camera for image acquisition.

Response to Arguments

3.   Applicant's arguments with respect to claims 1-18 and 20-21 have been

considered but are moot in view of the new ground(s) of rejection.

As to applicant's main argument with respect to the limitation of "the processor,

upon recognizing the audio command, activates an image acquisition component

that is configured to recognize a user hand gesture related to manipulating the

PIP display characteristic, the processor manipulates the PIP display

characteristic according to the audio command and the hand gesture", note that

Pavlovic does demonstrate the concept of a system utilizing a combination of

"audio commands" and a "related gesture" from a user as a means of controlling

a graphical object on display, which is analysis to where Inagaki controlled a

specific graphical object such as a PIP on a display (see Pavlovic page 123 3.

Experimental Results section). Therefore, it would have been obvious for one

ordinary skill in the art at the time of the invention to use a "received audio

command and related gesture from a user", as taught by Pavlovic in the

apparatus of Inagaki, because of the motivation directly provided by Pavlovic:

"Psychological studies, for example, show that people prefer to use hand

gestures in combination with speech in a virtual environment, since they allow

the user to interact without special training or special apparatus". Pavlovic

further teaches that "words or gestures alone can be used", therefore, it would

have been obvious for one ordinary skill in the art at the time of the invention to

use words and gestures alternatively, or simultaneously, to control the data inputting since it merely depends on the user's preference and the type of the application being used. Any levels of integration of the voice commands and gesture commands would perform equally well in providing input to the computer. Furthermore, it would have been obvious matter of design choice to choose whether to enter a voice command first, then a gesture command, or in opposite order, since it merely depends on the function being performed and the assignments of the commands. For example, if movement of the cursor is controlled by gesture commands and selection of a menu item is input by voice commands, then whether a voice command or a gesture command is needed first would depend on the current position of the cursor: gesture commands first if the user needs to move the cursor, but voice commands first if the user wants to select the current highlighted menu item (this reads on the limitation of "the processor, upon recognizing the audio command, activates an image acquisition component that is configured to recognize a user hand gesture related to manipulating the PIP display characteristic, the processor manipulates the PIP display characteristic according to the audio command and the hand gesture"). As evidence, Cox teaches a data inputting system for a computer using voice commands and gesture commands, wherein some voice commands trigger input from gesture commands (column 5 lines 10-19).

The remainder of the pertinent topics for argument are present in the appropriate rejections above.

Conclusion

4.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kent Chang whose telephone number is 571-272-7667.

The examiner can normally be reached on Monday to Thursday from 9:00 AM to 6:00

PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Sumati Lefkowitz, can be reached at 571-272-3638.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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571-273-8300

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Business Center (EBC) at 866-217-9197 (toll-free).

Kent   Chang
Primary Examiner
Art Unit 2629Division 2629

kc

8/18/06